

# *Hyperbaena domingensis* (DC.) Benth. (Menispermaceae), new records for the Atlantic Forest from northeastern Brazil

Bruno S. Amorim<sup>1</sup>, Diogo Araújo<sup>2</sup> and Marccus Alves<sup>1</sup>

<sup>1</sup> Laboratório de Morfo-Taxonomia Vegetal, Dept. Botânica, Universidade Federal de Pernambuco. CEP 50670-901. Recife, PE, Brazil.

<sup>2</sup> Universidade Estadual Paulista, Campus Bela Vista, Departamento de Botânica, Pós-Graduação em Ciências Biológicas (Biologia Vegetal). CEP 13506-900. Rio Claro, SP, Brazil.

\* Corresponding author. E-mail: [brunosarim@yahoo.com.br](mailto:brunosarim@yahoo.com.br)

**ABSTRACT:** *Hyperbaena domingensis* (DC.) Benth. has new records for the Atlantic Forest from northeastern Brazil. It is found in lowland coastal, sub-montane and montane remnants of Atlantic Forest as part of the forest canopy or draped over edge shrubs and treelets. It can be recognized by the ovate to oblong leaves, spiciform or paniculiform inflorescence, dichlamydeous and 3-merous flowers, drupaceous and purple (at maturity) fruits, and horseshoe-shaped seeds. Comments, distribution map, and pictures are presented here.

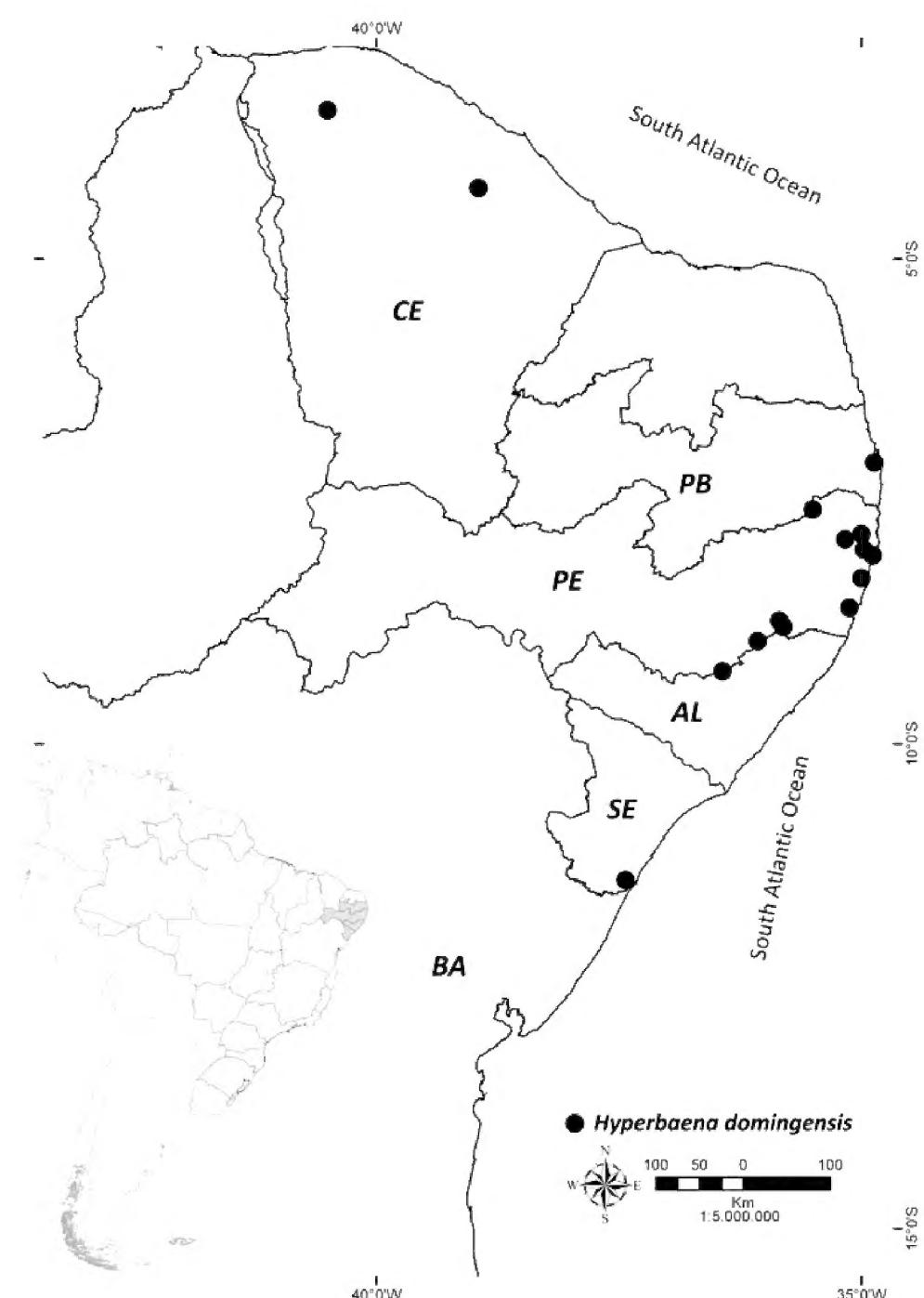
*Hyperbaena domingensis* (DC.) Benth. is distributed in tropical forests and ranges from coastal forests of the Antilles, Venezuela, Colombia, Bolivia, Guyana, Suriname, and French Guiana to eastern Brazil (Barneby 2001). The species has a disjunct distribution between the Atlantic and Amazon Forests and is cited as widely distributed in Brazil (Braga 2012). In the northeastern Brazilian region, *Hyperbaena domingensis* has been registered for the states of Bahia (Braga 2012) and Paraíba, (Barbosa *et al.* 2004) where it has been recorded in the montane Atlantic forest vegetation locally called “Brejos de Altitude”. The distribution is largely expanded here to include other states of northeastern Brazil.

***Hyperbaena domingensis* (DC.) Benth., J. Proc. Linn. Soc., Bot. 5: 50. 1861. (Figures 1-2) = *Cocculus domingensis* DC., Syst. Nat. 1: 528. 1817**

Woody vine of the forest canopy or draped over edge shrubs and treelets. It is characterized by having leaves 3-16.5 x 6-7.5 cm, ovate to oblong; male inflorescence axillary, usually clustered, distinctly paniculate; bracts 0.5-1 mm long, lanceolate; bractlets 3, ca 0.5 mm long, ovate-lanceolate; female inflorescence axillary, usually solitary, paniculate or racemose; bracts 1 mm long, lanceolate; bractlets 3, 0.6 mm long, lanceolate; flowers with sepals and petals 6 in 2 series each one, the outer 0.6-0.8 mm long, obovate, and the inner 0.8-1.2 mm long, ovate; stamens usually 6, filaments ca 0.4 mm long; carpels usually 3, oblong-ellipsoid, ca 0.8 mm long; fruits drupaceous, 1.0-2.2 x 0.7-1.3 cm, ellipsoid, purple (at maturity) and seeds 2 x 1 cm, and embryo horseshoe-shaped.

The species is further characterized by the lowermost pair of primary veins arising near the base of the leaf-blade, thus appearing triplinerved, the staminate flowers with outer sepals obovate and inner sepals ovate, the stamen filaments ca. 0.4 mm long, and the fruit 1.2-2.3 cm long (Mathias and Theobald 1981). Some samples of

*H. domingensis* are often misidentified as *Abuta* Barrère ex Aubl. (Costa and Sano 2007), however, the species differs by the dichlamydeous flowers, and the seeds horseshoe-shaped and lacking endosperm.



**FIGURE 1.** Distribution map of *Hyperbaena domingensis* (DC.) Benth. in the northern part of the Atlantic Forest. AL - Alagoas state; BA - Bahia state; CE - Ceará state; PB - Paraíba state; PE - Pernambuco state; SE - Sergipe state.

**Key for genera of Menispermaceae from Atlantic Forest of Northeastern Brazil (Based on Kessler 1993).**

1. Male and female flowers without petals. .... 2  
 1'. Male and female flowers with petals. .... 3

2. Male flower with stamens-6; female flower with staminodes-6; embryo vermiform. .... *Abuta* Barrère ex Aulbl.  
 2'. Male flower with stamens-3; female flower without staminodes; embryo straight. .... *Disciphania* Eichler  
 3. Male flowers with sepals-9-36; female flowers with sepals-9-36. .... 4  
 3'. Male flower with sepals-4-6 and female flower with sepals-1 or 6. .... 6  
 4. Male and female flowers with sepals-9. .... *Borismene* Barneby  
 4'. Male and female flowers with sepals-12-36. .... 5  
 5. Anthers with a transverse dehiscence; female flowers petals-6. .... *Chondrodendron* Ruiz. and Pav.  
 5'. Anthers with oblique dehiscense; female flower without petals. .... *Sciadotenia* Miers  
 6. Male flowers with sepals-4; female flower sepal-1, carpel-1. .... *Cissampelos* L.  
 6'. Male flowers with sepals-6; female flowers sepals-6, carpels-3-5 (rarely 2 or 1 in *Odontocarya*). .... 7  
 7. Stamens conate; seed with embryo straight. .... *Odontocarya* Miers  
 7'. Stamens free; seed with embryo lineate or horseshoe. 8  
 8. Female flowers with petals-3, without staminodes. .... *Curarea* Barneby and Krukoff  
 8'. Female flowers with petals-6, with staminodes. .... 9  
 9. Stamens latrorse; fruit with endocarp bony. .... *Telitoxicum* Moldenke  
 9'. Stamens not latrorse; fruit with endocarp woody to crustaceus. .... 10  
 10. Anthers with transverse or oblique dehiscence; fruit with endosperm ruminate; embryo lineate. .... *Orthomene* Barneby and Krukoff  
 10'. Anthers with longitudinal dehiscence; fruit with endocarp woody to crustaceus; embryo horseshoe. .... *Hyperbaena* Miers ex Benth

The new records of *Hyperbaena domingensis* are from remnants of the northern part of the Atlantic Forest. It was found in lowland coastal forest of the states of Paraíba, Pernambuco, and Sergipe, in submontane forest of the states of Alagoas, and Pernambuco, and in montane forest ("Brejos de Altitude") of the states of Alagoas and Ceará (Figure 1).

**Material examined:** BRAZIL. Alagoas: Quebrangulo, REBIO Pedra Talhada, 26.IV.2012, fr., B.S. Amorim 1556 et al. (UFP, JPB, NY); São José da Lage, Usina Serra Grande, 25.I.2003, fr., M. Oliveira and A.A. Grillo 1260 (UFP). Ceará: Guaramiranga, Serra do Baturité, 16.VI.1989, fr., A. Figueirêdo s/n (IPA-54829); Sobral, Serra da Meruóca, 11.III.1958, fr., T.N. Guerra 546 (NY). Paraíba: João Pessoa, Jardim Botânico, 22.VIII. 2007, fl., P.C. Gadelha-Neto 1752 (JPB); 20.X.2003, fl., P.C. Gadelha-Neto 1008 (JPB); 20.XII.2002, fl., fr., P.C. Gadelha-Neto and M. Costa-Santos 834 (JPB). Pernambuco: Cabo de Santo Agostinho,

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**FIGURE 2.** *Hyperbaena domingensis* (DC.) Benth. A. General habit of the branch; B. Infructescence with mature and immature fruits; C. Detail of horseshoe-shaped seed; D. Detail of horseshoe-shaped embryo.

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